**Student research position in the group of Cellular and Molecular Pharmacology at Louvain Drug Research Institute (FACM/LDRI), from UCLouvain, in Brussels.**

<http://www.facm.ucl.ac.be/>

Internship for a motivated BSc or MSc student of at least 5 months on the first and/or second semester of course 2020-2021, ideally to do the “TFG” or “TFM”. Dates are flexible.

Antimicrobial resistance is a worldwide health problem that threatens to be one of the leading cause of death in the next decades. In addition, persistent forms of infection renders the pathogens transiently insensitive to most of the antibiotherapies, leading to a failure in the treatment. FACM is a group with large expertise in pharmacology, biophysics and microbiology and one of the research focus are the persistent infections, such as intracellular infections and biofilms.

The student will join the research activity in novel anti-biofilm strategies in an orthopedic setting. In the project, we focus on prosthetic joint infections (PJI). This is an uncommon but severe complication caused mainly by Staphylococci, but also by other bacterial and fungal pathogens. The nature of these infections are the biofilms, a consortium of microorganisms embedded in an extracellular matrix. The only current effective treatment of PJI involves the removal of the device, what requires at least another surgery and causes great morbidity to the patient. In addition, we are interested in polymicrobial infections, involving more than one pathogen at the same site, which have an estimated failure rate of 50%. A failure of the treatment may lead to a chronic infection, amputation or death.

The group has already set up a polymicrobial biofilm model in vitro and the student will explore the combination of enzymes and antimicrobials against the biofilm using microbiology, microscopy and analytical techniques.

The group will provide the training for the techniques to use, but the student is required to have basic laboratory experience. Good English or French skills are required. Applications should include a letter of motivation and a short CV, in English or French. For more information, do not hesitate to contact albert.ruiz@uclouvain.be or francoise.vanbambeke@uclouvain.be (professor).